REMARKS

Claims 13-27 are pending in this application. By this Amendment, claims 28-36 are cancelled, and claims 21 and 24 are amended. Reconsideration and withdrawal of the rejection in view of the foregoing amendments and the following remarks are respectfully requested.

The Office Action makes the Election Requirement set forth in the January 16, 2003 Final Rejection final and withdraws claims 28-36 from consideration. Applicant continues to believe that the Election Requirement is improper because the subject matter recited in claims 28-36 is also recited in the originally filed claims, and because the claimed subject matter is clearly shown in Figure 5, the allegedly elected specie. However, to expedite prosecution, Applicant is voluntarily cancelling claims 28-36 at the present time.

The Office Action rejects claims 13-27 under 35 U.S.C. §102(b) over U.S. Patent No. 5,491,888 to Sakurai et al. (hereinafter "Sakurai"). This rejection is respectfully traversed.

Applicant respectfully submits that Sakurai is directed to a method for mounting component chips in an apparatus where Figure 1 shows a mounting apparatus 41 having a first carriage 49 mounted on guide rails 51 and a second carriage 45 mounted on the first carriage 49. The first carriage 49 is configured to move on the guide rails 51 in a first direction and the second carriage 45 is configured to move along the first carriage 49 in a second direction to form an X-Y gantry. The mounting apparatus 41 also includes a conveyer 42 configured to convey

printed circuit boards (PCBs) across a top of the mounting apparatus 41 in a straight path under the second carriage 45.

The second carriage 45 is shown in Figures 4 and 5 and consists of three pick-up heads 59 fixed to the second carriage 45 and fixed relative to one another. Each pick-up head 59 has a pick-up nozzle 61 which can be raised and lowered in the Z direction by a Z-axis servo motor 62. Each pick-up head 59 also includes an interference detector 66 and an R-axis servo motor 64. A laser light source 68 located to one side of the three pick-up heads 59, and a charge coupled detector (CCD) 69 is located on the opposite side of the three pick-up heads 59 from the laser light source 68. The laser light source 68 is configured to project light L past the three pick-up nozzles 61 to the CCD 69. The pick-up nozzles 61 must be fixed in a staggered position relative to one another and with respect to the angle of the laser light in order for the laser light source 68 and the CCD 69 to receive an image of each pick-up nozzle 61 and pick-up article K held thereby:

> [A]s may be clearly seen in Figures 1, 3, 5, 6 and 7, the pick-up heads 59 are staggered relative to each other in the "Y" direction. This is done so that the light rays "L" will impinge upon each of the pick-up articles "K" and cast a shadow on a respective portion of the CCD 69 as clearly shown in Figure 7. Col. 5, lns. 40-45.

Accordingly, each pick-up head 59 is immoveably mounted on the second carriage 45 in a staggered position relative to one another to facilitate operation of the laser light source 68 and CCD 69.

Because the mounting apparatus of Sakurai conveys the PCBs in a straight path through the mounting apparatus, Sakurai fails to disclose or suggest a method for surface mounting electrical components including locating a PCB at a first mounting position by moving the PCB in both the X and Y directions, as set forth in claim 13. Thus, claim 13 is in allowable condition.

Claims 14-20 are allowable for at least the reasons discussed above with respect to independent claim 13, from which they depend, as well as for their added features. For instance, claim 15 recites that the moving step includes simultaneously moving the plurality of suction nozzles with respect to each other to mount the electrical components on the PCB. Because the suction nozzles of the Sakurai device are fixed respect to each other, they cannot move with respect to each other. Similarly, claim 16 recites that the moving step includes simultaneously moving the plurality of suction nozzles with respect to each other in both the X and Y directions. For all the above reasons, Applicant respectfully requests that the rejection of claims 13-20 be withdrawn.

Additionally, because Sakurai shows a mounting apparatus where the mounting heads and pick-up nozzles are fixed with respect to one another, Sakurai neither discloses nor suggests a method for surface mounting electrical components including moving a plurality of suction nozzles with respect to a PCB and with respect to each other in at least one of an X and a Y direction. Thus, claim 21 is in allowable condition.

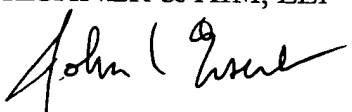
Claims 22-27 are allowable for at least the reasons discussed above with respect to independent claim 21, from which they depend, as well as for their added features. For instance, claim 23 recites that the moving step comprises simultaneously moving the plurality of suction nozzles with respect to each other. Claim 24 recites that the moving step comprises moving the plurality of suction nozzles with respect to each other in both the X and Y directions. Because the suction nozzles of the Sukurai device are fixed with respect to each other, the device necessarily cannot perform the functions recited in claims 23 and 24. For all the above reasons, Applicant respectfully requests that the rejection of claims 21-27 be withdrawn.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned attorney, **Randall H. Cherry**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP



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